CHAPTER 2

ORGANIZATION OF NAVAL AVIATION

INTRODUCTION

You first learned about Navy organization in recruit training. Here, we deal primarily with the organization of naval aviation. You will become familiar with the overall picture of the organization of naval aviation. This knowledge will help you understand the importance of your job as an Airman.

Naval aviation starts with the Secretary of the Navy, who is head of the Navy Department. The Navy Department is under the cabinet post of the Secretary of Defense. The training manual *Basic Military Requirements*, NAVEDTRA 12018, covers the organization of the Navy Department.

Figure 2-1 shows the operational organization for naval aviation. The Chief of Naval Operations (CNO) is the head of the military part of the Navy Department. He/she is usually the senior naval military officer in the Department.

An organization does not remain static. Missions differ and change. Various missions and tasks influence the organization of a particular squadron, station, or ship.

Whether you are assigned to a shore duty or shipboard billet, you are part of a division. There is a division officer in charge. The division officer is responsible for training personnel within the division. He/she makes sure that command policies are carried out. The division officer is responsible for seeing that the jobs assigned to the division are completed on time. You will probably be assigned to a smaller group called a *crew.* A senior petty officer is in charge of the crew. These petty officers will help you with your on-the-job and in-service training.

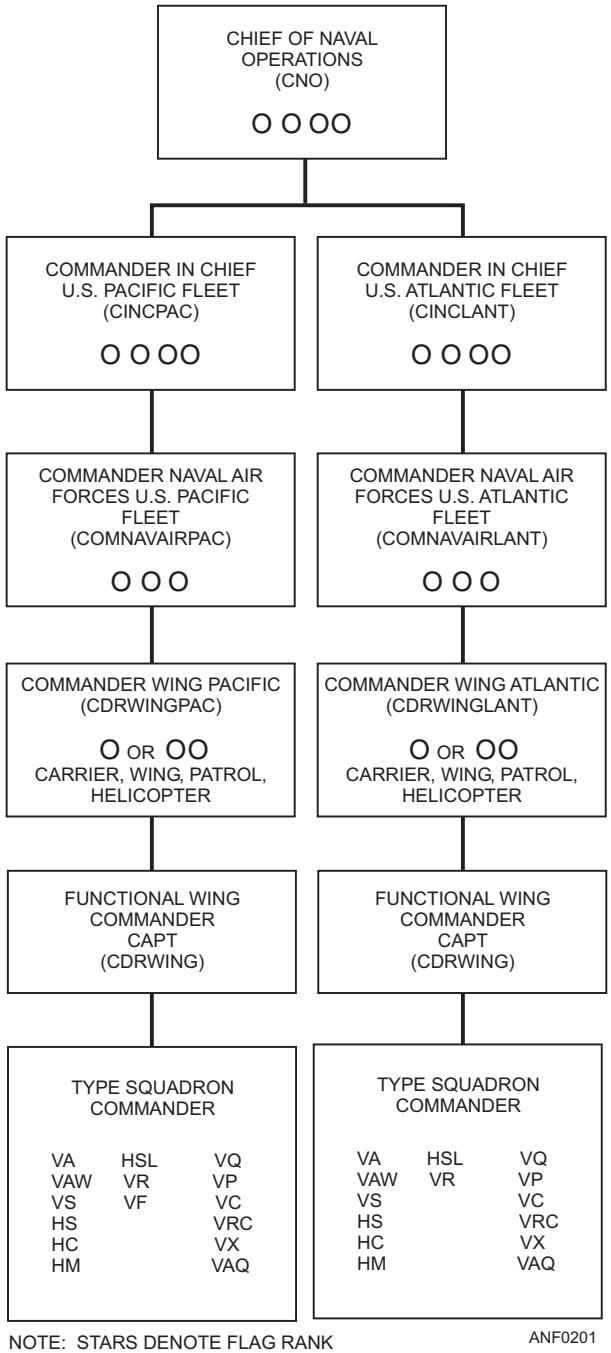


Figure 2-1.—Organizational chart of naval aviation.

NAVAL AVIATION CHAIN OF COMMAND

LEARNING OBJECTIVE: Recognize the naval aviation chain of command and your position within the chain.

Every organization in the Navy has a chain of command. Figure 2-1 shows a typical chain of command. The commanding officer of a squadron or ship must report to a superior officer. That superior officer must report to a superior, and this procedure is repeated all the way up to the CNO. You have a chain of command to follow. You report to your crew leader or supervisor. The crew leader or supervisor reports to the

branch or division chief petty officer. The branch or division chief reports to the division officer. Normally, all matters concerning you are handled at the division level. Matters of extreme importance should go to your department head. From the department head, the chain goes to the executive officer, and finally to the commanding officer. This chain of command could change some from command to command, but basically it will remain the same.

The chain of command serves many purposes in the accomplishment of the Navy's mission. The chain of command provides direction in the assignment of duties. Communication is the key word in the chain of command. Communication must flow in both directions, up and down the chain of command. A good chain of command provides a way to solve work-related problems.

Q2-1. What is the purpose of the chain of command?

NAVAL AIR STATION (NAS) ORGANIZATION

LEARNING OBJECTIVE: Identify the organizational structure of a naval air station and recognize the responsibilities within the organizational structure of these activities.

There are several activities devoted to naval aviation. Certain stations provide facilities for equipping, supplying, repairing, and maintaining aircraft. Others provide specialized training to flight and ground personnel.

You have already had duty at the Recruit Training Command. In this section, you will learn about the basic organization of a naval air station that you will see during your naval career. It should show you that there are many duties to be performed. You can strike for any one of the aviation ratings found on a naval air station. The organization of a naval air station is similar to that of a squadron or a carrier, but it is much more extensive.

The mission of a naval air station is to provide service and support to the fleet. A naval air station carries out its mission through several functions.

- It supports operating aircraft and squadrons assigned to the naval air station.
- It also supports any transient aircraft that land at the naval air station.
- It provides air traffic control to all aircraft flying in its controlled air space.

Naval air station and squadron personnel perform organizational-level maintenance on their assigned aircraft. The naval air station also has the responsibility for providing intermediate-level maintenance. This is a higher level of maintenance work done on aircraft. Some naval air stations provide depot-level maintenance. This is the highest level of maintenance for naval aircraft.

Providing training is another function of a naval air station. Some naval air stations provide one or more types of flight training. There are three types of flight training—preflight, basic, and advanced flight training. These three types of flight training apply to naval officer aviators and to enlisted aircrew personnel.

Some naval air stations provide the Fleet Readiness/Replacement Aviation Maintenance Program (FRAMP). FRAMP provides formal and on the job (OJT) maintenance training for the type of aircraft and the support equipment used on that aircraft.

Not all naval air stations do everything you will read about here. Some can handle all phases of training. Others may handle only the maintenance phase. The size of naval air stations varies according to their functions. However, all naval air stations provide service and support to the fleet.

Figure 2-2 shows the organization of a typical naval air station. The commanding officer (CO) is responsible for the safety, well-being, and efficiency of the command.

The commanding officer and executive officer have several special assistants. They are the legal officer, the service information officer, the chaplain, the aviation safety officer, the management engineer, and the general safety officer.

ADMINISTRATION DEPARTMENT

The administration department is responsible for providing administrative services for the station. These services include mail distribution, communications, and maintenance of personnel files. The divisions within the administration department include the administrative, communications, personnel administrative support services (PASS), mess, special services, and family services divisions.

COMPTROLLER DEPARTMENT

The head of the comptroller department assists the commanding officer and the executive officer. He/she advises the station budget board, the department heads,

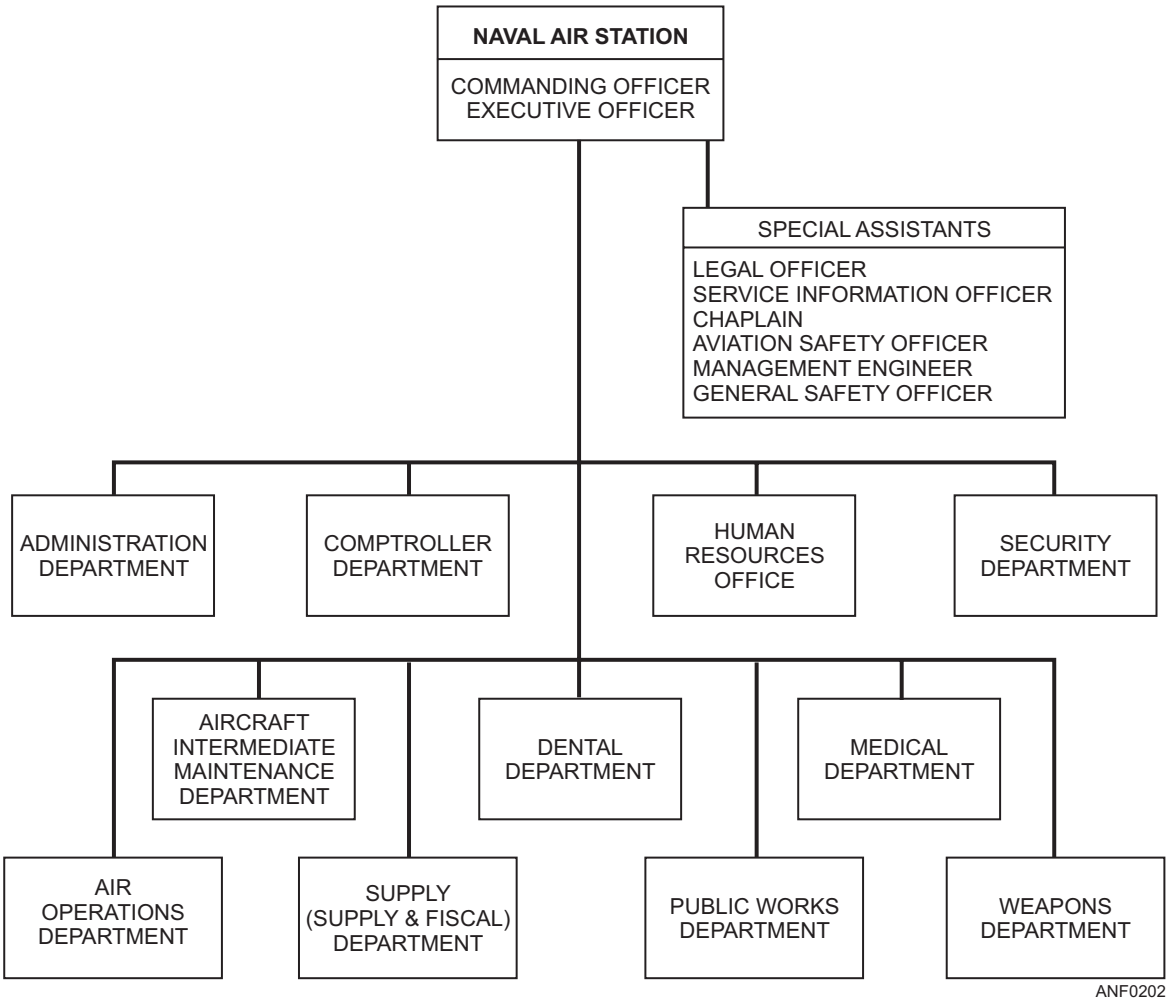


Figure 2-2.—Organizational chart of a naval air station.

and other levels of station management. The comptroller assists in planning, organizing, directing, and executing financial matters that affect the station. In this capacity, the comptroller provides technical guidance, coordination, and advice in budget control. He/she recommends allocations of civilian personnel to departments and programs. The comptroller develops and monitors data collection systems for program performance analysis and progress reporting. He/she also provides accounting and disbursing services.

HUMAN RESOURCES OFFICE (HRO)

The human resources office is headed by a naval officer or a civilian personnel officer. He/she is assisted by civilian experts on employment, wage, and classification. Employee relations and services are also handled in this office.

SECURITY DEPARTMENT

The security department consists of the police guard or marine guard, shore patrol, fire, brig, and administrative divisions. The department is responsible for maintaining the security of the station to prevent sabotage, espionage, theft, fire, or other hostile acts. The functions of the department include internal security, investigation, training, and coordination for off-station shore patrol activity.

AIR OPERATIONS DEPARTMENT

The air operations department is responsible for providing and operating the airfield. This department provides services to support aircraft operations, which include station, squadron, and transient aircraft (both military and civilian) support. The air operations department is also responsible for providing air traffic control in the air facility assigned to them. They collect, analyze, and report weather data, schedule flights, and update other important information. The department performs organizational maintenance for assigned aircraft, performs flight line services for transient aircraft, and operates firing ranges. Other services provided by the air operations department include ground electronics maintenance, photographic, and administrative functions within the department.

NOTE: The aircraft maintenance division is responsible for organizational-level maintenance of assigned and transient aircraft. The organization of this division is similar to that of a squadron, which is discussed later in this chapter.

SUPPLY DEPARTMENT

The supply department is headed by the senior supply corps officer. The department is responsible for the logistic support of the naval air station and all activities on the station. The supply officer and assistants have the responsibility for issuing all fuel and oils. Responsibilities extend to issuing aircraft parts and support equipment. The supply department also operates the general mess.

PUBLIC WORKS DEPARTMENT

The public works department is headed by a civil engineer corps officer. The officer in this position is responsible for the minor construction, maintenance, and operation of all public works and utilities. This department consists of utilities, maintenance, transportation, engineering, maintenance control, and administrative divisions. The department is staffed by both naval and civilian personnel.

WEAPONS DEPARTMENT

The weapons department is headed by a weapons officer. The department is responsible for the care, handling, stowage, accountability, and issuance of aviation ordnance, ammunition, and pyrotechnics. The department is also responsible for the maintenance of magazines, armories, and the equipment associated with ordnance.

DENTAL DEPARTMENT

The dental department is responsible for the oral health of all station military personnel. The senior dental officer performs dental examinations and does other dental work. He/she is assisted by dental officers and dental technicians.

MEDICAL DEPARTMENT

The medical officer is responsible for all health-related problems on the base. This includes prevention and control of disease and treatment of the sick or injured. The medical officer is informed of all matters regarding hygiene, sanitation, and epidemics. The medical officer also advises the commanding officer in matters affecting the health and physical fitness of personnel. A flight surgeon, under the direction of the medical officer, takes care of all aviation medicine. The medical department is also responsible for the medical care of dependents of military personnel.

AIRCRAFT INTERMEDIATE MAINTENANCE DEPARTMENT (AIMD)

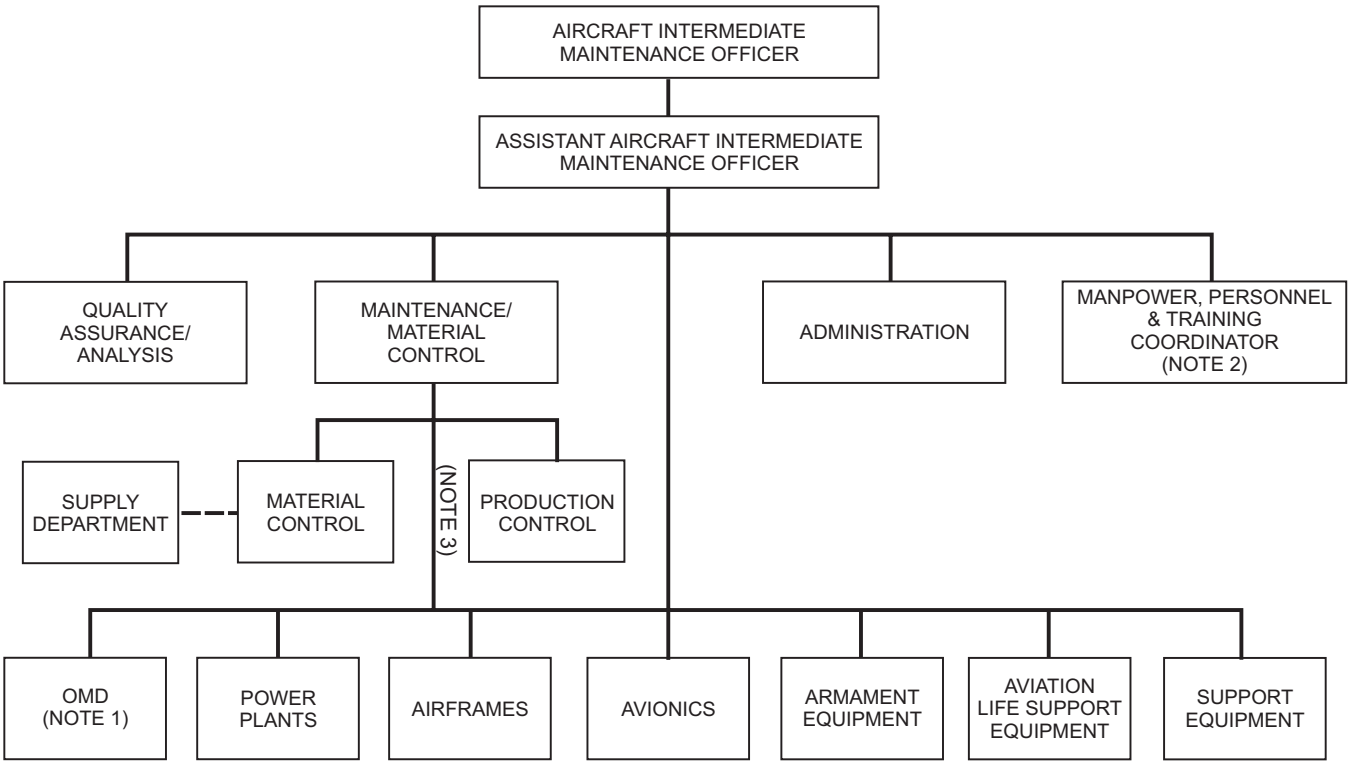
The primary function of the aircraft intermediate maintenance department (AIMD) is to perform intermediate-level maintenance. It supports station aircraft, tenant squadrons, and special units.

NOTE: Naval aircraft maintenance is divided into three levels—organizational, intermediate, and depot. **Organizational maintenance** is work performed by operating units, such as a squadron, on a day-to-day basis. This work consists of inspecting, servicing, lubricating, adjusting, and replacing parts, minor assemblies, and subassemblies. **Intermediate maintenance** is work performed at centrally located facilities, such as an AIMD, in support of operating units. This work consists of calibration, repair, or replacement of damaged or unserviceable parts, components, or assemblies; limited manufacture of parts; and technical assistance. **Depot maintenance** is performed at large industrial-type facilities, such as a Naval Aviation Depot (NADEP), and includes major overhaul and major repair or modifications of aircraft, components, and equipment, and the manufacture of parts.

The aircraft intermediate maintenance department is broken down into divisions, as shown in figure 2-3. A brief description of each is provided in the following paragraphs.

Quality Assurance/Analysis (QA/A)

QA/A is staffed with a relatively small group of highly skilled personnel. These permanently assigned personnel are responsible for conducting and managing the QA/A programs of the department. The maintenance personnel assigned to QA/A are known as quality assurance representatives (QARs). A data analyst is assigned to QA/A. His/her purpose is to get more efficient use of the information collected by the aviation maintenance data system (MDS). The primary duty of the data analyst is to perform all MDS functions of QA/A. The QA/A division also maintains the technical library.



Breakdown beyond the basic divisions are not illustrated because of the variety of branches possible. Activities will be required to establish the necessary branches in accordance with their individual requirements. Volume V, Appendix D will be used as a guide to establish branches/work centers within the respective divisions. Branches should be established only when more than one work center is involved, for example, Jet Engine Branch with work centers forJ79 engine and J52 engine.

NOTE 1: When specific authority has been granted to combine the operations maintenance division (OMD) and IMA, an organizational maintenance division will be established.

NOTE 2: For AIMDs not large enough to rate the E-9 billet associated with this function, and in those cases where full E-9 and E-8 manning is not available, this separate organizational position is not required.

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NOTE 3: Direct authority for production matters only.

Figure 2-3.—Aircraft intermediate-level maintenance department (ashore) organizational chart.

The QA concept is basically that of preventing defects. The concept takes in all events from the start of the maintenance operation to its completion. Quality assurance is the responsibility of **all maintenance personnel**. The achievement of QA depends on prevention, knowledge, and special skills.

Administration Division

The administration division provides clerical and administrative services for the AIMD department. The administration division maintains, controls, and establishes a central reporting and record-keeping file system for all maintenance reports and correspondence. The safeguarding and distributing of personal mail to department personnel is another function of the administration division.

Manpower, Personnel, and Training Coordinator

The manpower, personnel, and training coordinator will normally be a senior enlisted (E-9) person. The coordinator ensures that all divisions in AIMD are conducting training sessions to improve the quality of performance. He/she also ensures promotional opportunities are available for the assigned personnel. The coordinator directs periodic inspections of assigned work spaces and personnel.

Maintenance Material Control

Maintenance material control is the heart of the AIMD. It is tasked with the accomplishment of the overall production effort. It is responsible for repairing aircraft and related support equipment at the intermediate level of maintenance. There are two control centers under maintenance material control—production control and material control.

PRODUCTION CONTROL.—Production control schedules workloads and coordinates production. It ensures the efficient movement of all aircraft or parts through the AIMD activity. Production control ensures maximum use of personnel and material resources. Production control has many functions in an AIMD, but its main responsibility is to manage resources efficiently.

MATERIAL CONTROL.—Material control within a maintenance organization is responsible for parts and material used in the activity. Material control ensures that parts and materials are ordered and received. Once parts or material are received, they are routed to the applicable work centers and are not allowed to accumulate.

Supply

The supply support center (SSC) of an AIMD is responsible for receiving all parts and materials ordered. SSC prepares the requisitions and picks up and delivers the material to the various AIMD work centers. If maintenance is being performed 24 hours a day, the supply support center will be open 24 hours a day. This allows for a quick response to the work centers' material needs.

Organizational/Operations Maintenance Division (OMD)

An **o**rganizational **m**aintenance division (OMD) is normally established in an AIMD. Specific authority has to be granted to combine the organizational maintenance divisions and the intermediate maintenance activities on board a naval air station. Not all AIMDs will have an organizational maintenance division. An operations maintenance division is normally established when there is four or less aircraft assigned. OMDs on board a naval air station are responsible for all organizational-level maintenance that must be performed to their assigned aircraft.

Power Plants Division

The power plants division performs all of the three-degree gas turbine engine repairs. The three-degree repair program is divided into first-degree repair, second-degree repair, and third-degree repair. The program covers all gas turbine engines, their accessories, and components. This includes aircraft engines, auxiliary power units, and airborne or ground starting units.

Airframes Division

The airframes division has responsibilities associated with the Hydraulic Fluid Contamination Control Program. The division fabricates and tests hoses, tubes, and sheet metal parts for aircraft structural components. The division is responsible for the recertification of aeronautical equipment welders. The division is responsible for nondestructive inspection (NDI), aircraft tire/wheel maintenance safety, and corrosion prevention/control programs.

Avionics Division

The avionics division tests and repairs electrical and electronics system components. The division is responsible for calibration of precision measuring equipment (PME) and for ensuring that personnel performing calibrations are qualified and trained. Corrosion prevention/control of avionics equipment, maintenance, and the safety of aircraft batteries are also the responsibility of the avionics division.

Armament Equipment Division

The armament equipment division is responsible for testing and repairing airborne weapon systems. This includes calibrations, cleaning, corrosion control, preservation, and storage programs.

Aviation Life Support Equipment Division

The aviation life support equipment division is responsible for the Aviator's Breathing Oxygen (ABO) program, which includes surveillance, contamination, and handling. The division is responsible for the maintenance of the egress, air-conditioning, and pressurization systems. Survival equipment for the aircraft and aircrew is another function of the division's responsibilities.

Support Equipment (SE) Division

The SE division supplies aircraft support equipment to all organizational-level activities on the naval air station. This division performs major repair and periodic inspection and maintenance of all aviation support equipment.

NOTE: Aviation support equipment includes, but is not limited to, such items as test stands, workstands, mobile electric power plants, pneumatic and hydraulic servicing equipment, and avionics test equipment.

Q2-2. What is the primary mission of a naval air station?

Q2-3. What officer is responsible for the safety, well being, and efficiency of the command?

Q2-4. On a naval air station, what department is responsible for providing and operating the airfield?

Q2-5. What are three primary responsibilities of the supply department?

Q2-6. What are the three levels of aircraft maintenance?

Q2-7. What is the basic concept of quality assurance (QA)?

Q2-8. What are the two control centers in the maintenance material control division?

Q2-9. What division performs all of the three-degree gas turbine engine repairs?

NAVAL AIR FACILITIES AND NAVAL AVIATION DEPOTS

LEARNING OBJECTIVE: Identify the functions of naval air facilities and naval aviation depots.

A **naval air facility** (**NAF**) performs maintenance functions on aircraft and support equipment assigned to that command. These functions sometimes include organizational- and intermediate-level maintenance. Naval air facilities are normally smaller than a naval air station. Naval air facilities are **not** equipped to handle large numbers of aircraft.

A **naval aviation depot** (**NADEP**) maintains and operates facilities for a complete range of depot-level rework operations to include designated weapons systems, accessories, and equipment. The depot manufactures parts and assemblies as required. It also provides engineering services in the development of changes to hardware design. The depot furnishes technical and other professional services on aircraft maintenance and logistic problems. They also perform other levels of aircraft maintenance for eligible activities when requested. The facility performs other functions as the Commander, Naval Air Systems Command may direct.

Q2-10. In what respect does a naval air facility (NAF) differ from a naval air station?

SQUADRONS

LEARNING OBJECTIVE: Identify the four basic types of squadrons, to include the organization within the squadron and the squadron mission; and recognize the responsibilities of squadron personnel and identify the function of squadron departments.

Squadrons are designated by the purpose they serve. You should be familiar with the various types, classes, and missions of each type of squadron.

TYPES OF SQUADRONS

There are four basic types of squadrons—carrier, patrol, composite, and noncombatant. In this section, you will learn about squadron missions and the primary aircraft that operates within a specific squadron.

Carrier Squadrons

There are five types of carrier squadrons. They are fighter, attack, strike/fighter, antisubmarine, and airborne early-warning squadrons.

Fighter squadrons (VFs) are used against aircraft and ground installations to defend surface units. They escort attack aircraft, and give close air support to landing forces. These squadrons combine maximum firepower and speed. The F-14 *Tomcat* is the primary aircraft assigned to a fighter squadron.

Attack squadrons (VAs) are employed for various missions including enemy attack, search, bombing, mining, and torpedo warfare. Aircraft assigned to an attack squadron may be the multipurpose F-18 *Hornet.*

Strike fighter squadrons (VFAs) are employed for both fighter and attack missions. The F/A-18 *Hornet* aircraft are assigned to strike fighter squadrons.

Antisubmarine squadrons (VS, HS, and HSL) include both fixed-wing aircraft (VS) and helicopters (HS and HSL). Their primary mission includes

Antisubmarine Warfare (ASW) search and attack of enemy submarines, supply convoy coverage, and antisurface surveillance and targeting. Their secondary mission provides search and rescue (SAR), vertical replenishment (VERREP), and medical evacuation (MEDIVAC). Aircraft assigned to a VS squadron include the S-3 *Viking*. Helicopters assigned to HS squadrons include the SH-60 *Sea Hawk* Mk III, which includes the Light Airborne Multipurpose System (LAMPS).

Airborne early-warning squadrons (VAWs) are carrier-based squadrons that provide early warning against submarines, weather, missiles, shipping, and aircraft. Aircraft assigned to an early-warning squadron include the E-2 *Hawkeye*.

Patrol Squadrons

Patrol squadrons (VPs) consist of aircraft that are land based and operate singly over land and sea areas. These squadrons are designed primarily for antisubmarine warfare (ASW), reconnaissance, and mining. Aircraft assigned to a patrol squadron include the P-3 *Orion.*

Composite Squadrons

Composite (utility) squadrons (VC and HC) include both fixed-wing aircraft (VC) and helicopters (HC). VC squadrons perform duties such as adversary, simulation, and target towing. HC squadrons perform duties such as ship's plane-guard, search and rescue (SAR), medical evacuation (MEDIVAC), vertical replenishment (VETREP), cargo and mail delivery, and troop and personnel transfer. Aircraft assigned to utility squadrons include the A-4 *SkyHawk*, SH-3 *Sea King*, H-46 *Sea Knight,* or the H-53 *Sea Stallion*.

Noncombatant Squadrons

There are three types of noncombatant squadrons. They are the development, tactical, and training squadrons.

Development squadrons include both fixed-wing aircraft (VX) and rotary-wing aircraft (helicopters) (HX). The mission of a development squadron is to test and evaluate fixed-wing and rotary-wing aircraft and their equipment. This type of squadron closes the gap between the experimental stages and the operational use of the new aircraft and its equipment. All types of aircraft that require testing and evaluation are assigned to these squadrons.

Tactical support squadrons (VRs and VRCs) provide for long-distance transfer of personnel and supplies (logistic support). Aircraft assigned to a tactical support squadron include the C-130 *Hercules,* C-9 *Skytrain*, C-2 *Greyhound*, and VS-3 *Viking*.

Training squadrons are designated VT and HT. The mission of a training squadron is to provide basic, advanced, operational, and refresher-type flight training. They cover both fixed-wing and rotary-wing aircraft. Some aircraft assigned to a training squadron include the, T-2 *Buckeye*, T-34 *Mentor*, C-12 *Kingair*, T-45 *Goshawk*, and various training helicopters.

ORGANIZATION OF A SQUADRON

The operating squadrons have a commanding officer assisted by an executive officer, department heads, division officers, maintenance officers, and enlisted personnel. You should know the organization of your squadron. Recognize your commanding officer and display the courtesy required by military etiquette. Know your division officer and your responsibilities to that position. Know your chief petty officers and other rated personnel in your division. They should be your biggest help in your professional advancement. Know your part in your own organization. Now, let's take a look at a typical squadron organization, starting with the commanding officer.

Commanding Officer (CO)

The CO is the senior naval officer in the squadron. He/she is known as the squadron commander. The commanding officer has the duties and responsibilities as outlined in *U.S. Navy Regulations*. These duties and responsibilities include morale, discipline, readiness, and efficiency. The CO issues operational and employment orders to the entire squadron. The executive officer, department heads, and other officers and personnel fall under the commanding officer. See figure 2-4. The commanding officer is responsible for the operational readiness of the squadron.

The squadron safety officer works directly under the commanding officer. The safety officer's responsibility is to ensure the squadron follows all pertinent safety orders. The squadron safety officer is a member of the squadron aircraft accident board. He/she serves as crash investigator of all crashes occurring within the squadron.

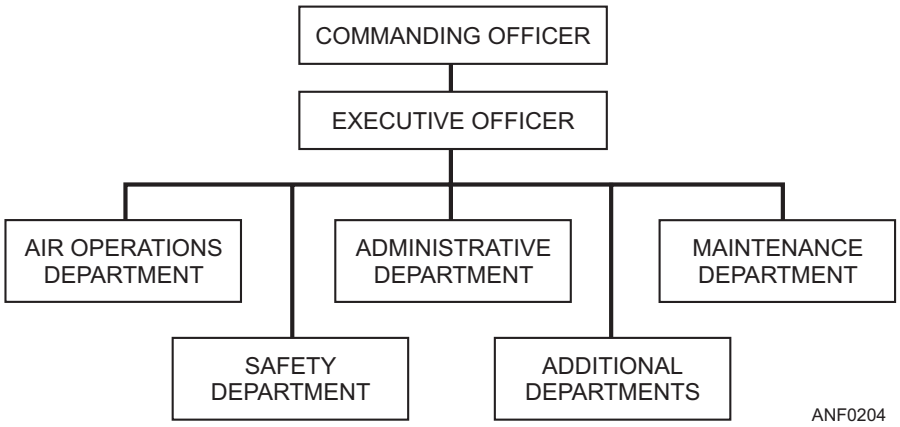


Figure 2-4.—Typical aircraft squadron organizational chart.

Executive Officer (XO)

The XO is the second senior naval aviator in the squadron. He/she is the direct representative of the CO, whose duties are prescribed in *U.S. Navy Regulations*. The XO is assisted by various department heads, whose duties vary according to their designated mission and tasks. The executive officer assures that the squadron is administered properly and the squadron commander's orders are carried out.

Maintenance Officer (MO)

The MO has administrative control over the maintenance department and is responsible to the CO for accomplishing the squadron mission. The maintenance officer establishes procedures and delegates authority to subordinates. The MO reviews the decisions and actions of subordinates and controls personnel assigned to divisions within the department. The MO is assisted by the assistant maintenance officer (AMO).

Maintenance Material Control Officer (MMCO)

This officer is responsible for the production effort of the department. The maintenance material control officer (MMCO) plans, schedules, and supervises all activities of the production divisions. The MMCO is responsible for obtaining all supplies needed to support the squadron workload and keeping related records.

Aircraft Squadron Departments

All aircraft squadrons have an administrative department and a safety department. Most squadrons also have an operations department and a maintenance department. Some squadrons have one or more departments in addition to the four already mentioned. Based upon the mission of the squadron, there may be a training, photographic, or intelligence department. A department head reports to the commanding officer, and is responsible for the operational readiness of the department. Department heads are responsible for organizing and training within the department. Operation, planning, security, safety, cleanliness of areas assigned, and records and reports are some of the department head responsibilities.

OPERATIONS DEPARTMENT.—The operations department (OPS) is responsible for the operational readiness and tactical efficiency of the squadron. Normally, the operations department consists of the logs and records, schedules, training, communications, and navigation divisions.

ADMINISTRATIVE DEPARTMENT.—The administrative department (ADMIN) is responsible for all the administrative duties within the squadron. This department takes care of official correspondence, personnel records, and directives. The personnel office, educational services office, public affairs office, and legal office are all part of the administrative department. The first lieutenant and command career counselor work as members of this department.

SAFETY DEPARTMENT.—The safety department is responsible for all matters concerning the squadron's safety program. Generally, this department is divided into the ground safety, aviation safety, and NATOPS divisions. The NATOPS division is responsible for ensuring that standardized procedures are followed in operating the squadron's aircraft.

MAINTENANCE DEPARTMENT.—The maintenance department is responsible for the overall maintenance of the squadron's aircraft. The maintenance department is usually divided into six areas. They are maintenance/material control, quality assurance/analysis, maintenance administration,

aircraft, avionics/armament, and line divisions. See figure 2-5.

Maintenance Administration.—This section provides administrative and clerical services for the aircraft maintenance department.

Quality Assurance/Analysis.—The quality assurance/analysis (QA/A) section inspects the work of the maintenance department. QA/A ensures that maintenance performed on aircraft, engines, accessories, and equipment is done according to current Navy standards.

The quality analysis (QA) section collects and reviews maintenance data. QA collects source documents prepared by shop personnel and delivers the documents to data processing for computer input. The analysis petty officer receives the results from machine-produced reports. The reports are used to develop statistical charts, graphs, and reports, which the maintenance officer and other management personnel use.

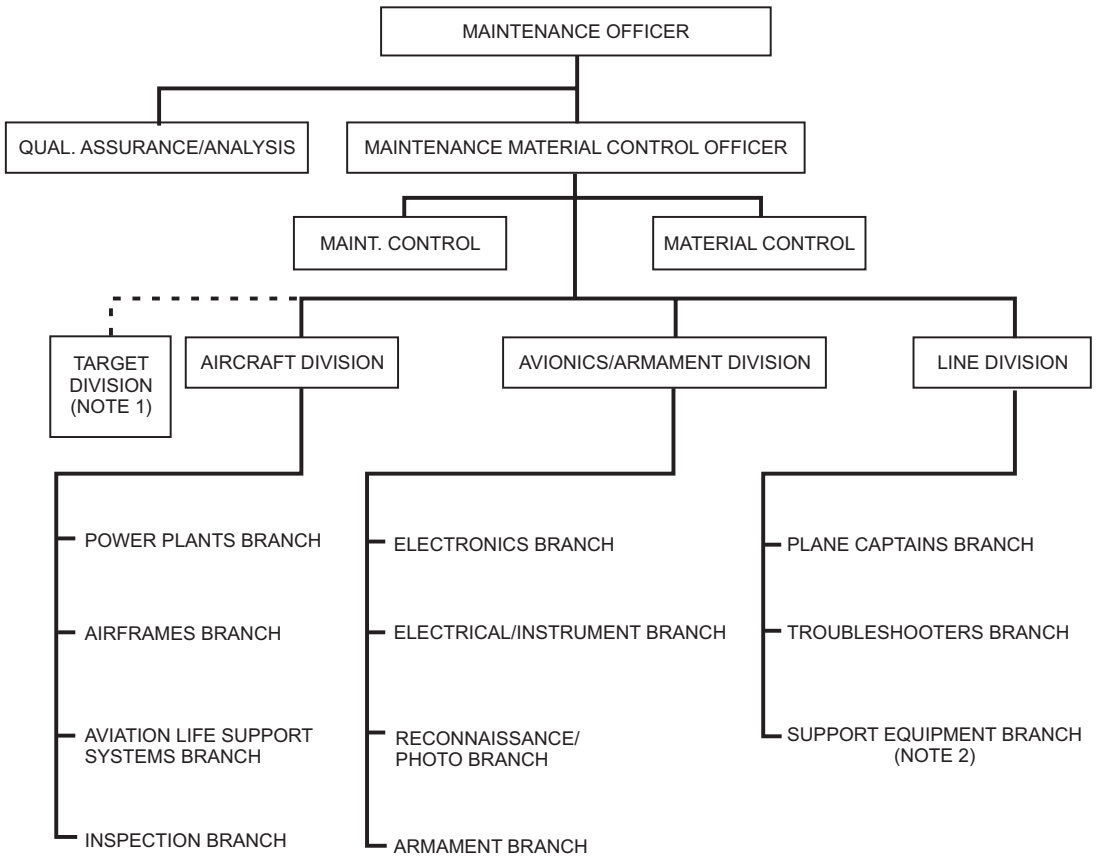
Maintenance Control.—Maintenance control is the heart of the aircraft maintenance department. Maintenance control is responsible for planning and scheduling the daily, weekly, and monthly workloads for the entire maintenance department.

Material Control.—Material control is responsible for ordering and receiving all aircraft parts and materials needed to support the maintenance department. Material control is also responsible for keeping the records involved in obtaining such material.

Types of Divisions

There are four basic types of divisions within a squadron. They are the target, aircraft, avionics/armament, and line divisions.

TARGET DIVISION.—The CO establishes a target division when extensive operation and maintenance of aerial or surface targets are needed.



NOTE 1: When responsibilities relative to the operation and maintenance of aerial or surface targets are extensive, the CO will establish a Target Division.

NOTE 2: When responsibilities relative to operation and maintenance of SE are extensive, the CO will establish an SE Branch under the line division.

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Figure 2-5.—Squadron aircraft maintenance department organizational chart.

AIRCRAFT DIVISION.—The aircraft division supervises, coordinates, and completes scheduled and unscheduled maintenance. It also performs inspections in the areas of power plants, airframes, and aircrew personnel protective/survival equipment. The aircraft production branches are located within the aircraft division. They are the power plants, airframes, aviation life support equipment, and inspection branches.

AVIONICS/ARMAMENT DIVISION.—The avionics/armament division maintains the electronic, electrical instrument, fire control, reconnaissance/ photo, and ordnance portion of the aircraft.

The avionics/armament production branches are located within the avionics/armament division. They are the electronics, electrical/instrument, reconnaissance/photo, and armament branches.

LINE DIVISION.—The line division performs scheduled and unscheduled maintenance work on the aircraft. This responsibility includes preflight, turnaround, daily and post-flight inspections, servicing as well as troubleshooting discrepancies.

The correction of aircraft discrepancies occurs on the line, providing the job does not require the removal of major assemblies. The ground handling of the squadron's aircraft is a function of the line division. The plane captain assignment/qualification program is administered by and is a responsibility of the line division.

The line division is responsible for the squadrons support equipment. This includes preoperation, postoperation, and daily inspections, as well as servicing and maintenance of the support equipment. Daily maintenance requirements cards (MRCs) are provided for each major type of support equipment used by the squadron. The MRCs set forth the minimum daily inspection required for each piece of support equipment.

The foreign object damage (FOD) prevention, fuel, oil, hydraulic fluid and oxygen surveillance programs are the responsibility of the line division.

The plane captains, troubleshooters, and support equipment branches are located within the line division.

Q2-11. What are the four basic types of squadrons?

Q2-12. What are the five types of carrier squadrons?

Q2-13. What are the three types of noncombatant squadrons?

Q2-14. What types of aircraft are assigned to a development squadron?

Q2-15. What is the primary mission of a tactical support squadron?

Q2-16. What officer is responsible for the operational readiness of a squadron?

Q2-17. What officer plans, schedules, and supervises all activities of the production divisions?

Q2-18. What are the four basic departments that make up an aircraft squadron?

Q2-19. What are the four basic types of divisions within a squadron?

AIRCRAFT CARRIER ORGANIZATION

LEARNING OBJECTIVE: Identify the purpose of the aircraft carrier and recognize its organization; recognize the function of the various organizations on an aircraft carrier.

The purpose of aircraft carriers is to maintain the aircraft at sea. Their operation is mobile and independent of land facilities. These operations include naval air defensive and offensive missions. The types of aircraft aboard a carrier vary from turboprop aircraft to high-performance jets. To maintain and operate these aircraft, carriers are equipped with many well-known special features. These features include the flight deck, hangar deck, elevators, arresting gear, and catapult systems.

You should know something of the organization of the carrier to better understand your relationship to the carrier's mission. You should also recognize the commanding officer of your carrier and know something about the responsibilities of that position. In addition to being a line officer qualified for command at sea, the commanding officer must be a naval aviator. The commanding officer is directly responsible for the ship's efficient performance of assigned tactical duties. The commanding officer is also responsible for the personnel assigned to his command. Responsibilities include welfare, morale, training, discipline, military etiquette, customs, and daily routines. Commanding officers have duties that are so extensive they cannot

personally attend to all the details involved. Figure 2-6 shows the standard aircraft carrier organization.

The executive officer aboard a carrier assists the captain the same as the executive officer of a squadron helps the squadron's commanding officer. The executive officer, the operations officer, and the air officer also must be qualified naval aviators.

CARRIER AIR WING

Carrier air wings consist of squadrons assigned by the Chief of Naval Operations (CNO). The air wing is under the command of an air wing commander. Air wing commanders report for duty to the commanding officer of the parent carrier. They have tactical command of their wings during wing operations. When ship-based, the air wing commander exercises the rights conferred by *U.S. Navy Regulations* on heads of departments. The air wing commander also has responsibilities similar to that of a department head. These responsibilities include internal administration of air wing personnel and material upkeep of assigned spaces and aircraft. In matters concerning air department functions, the air wing commander acts under the direction of the air department officer. Under the direction of the operations officer, the commander cooperates in matters concerning operations department functions. Air wings, squadrons, and units are established aboard CV and CVN, LHA, and LHD types of ships. See figure 2-7.

Under the carrier commanding officer and the air wing commander, squadron commanding officers maintain the squadron organization. See figure 2-8.

OPERATIONS DEPARTMENT

The operations department has the responsibility of air operations and the combat information center (CIC). The allied divisions, including air intelligence, photography, meteorology, lookout, recognition, and air plot are added responsibilities. These sections make up the OA and OI divisions to which you, as a striker, may be assigned.

AIR DEPARTMENT

The carrier air department is organized into divisions that are responsible for landing and launching operations. They also handle and service aircraft, and

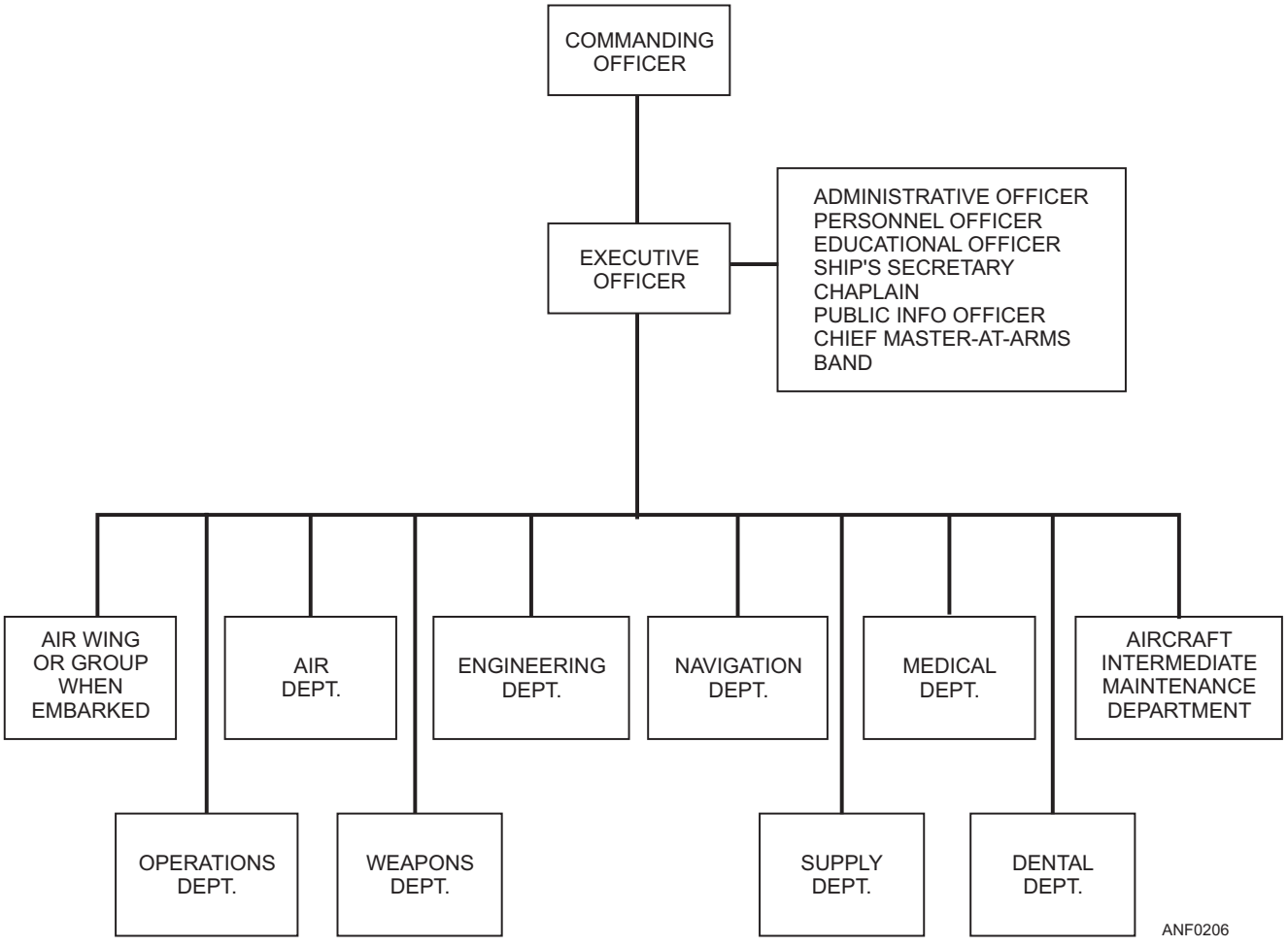


Figure 2-6.—Typical aircraft carrier organizational chart.

AIRCRAFT CARRIER (CV)

AMPHIBIOUS ASSAULT SHIP (LHD)

AMPHIBIOUS ASSAULT SHIP (LHA) ANF0207

Figure 2-7.—Typical aviation-type ships.

maintain the equipment necessary for these functions. Air department personnel are ship's company, and the department is a permanent shipboard activity.

Divisions within the air department may vary from ship to ship, but each one follows a broad general pattern. The maximum number of divisions is normally

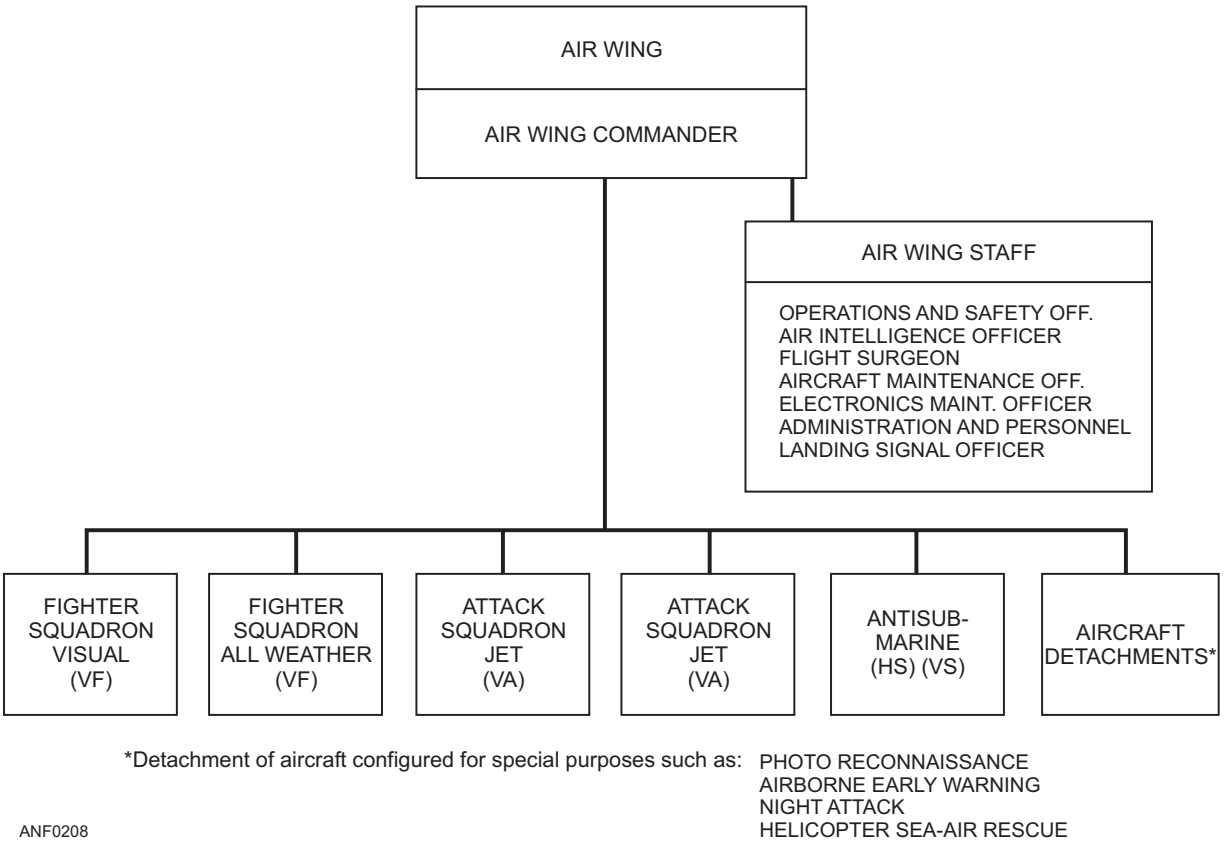


Figure 2-8.—Administrative organization of a typical CV air wing.

four in peacetime and seven in wartime. These are grouped according to the major functions of aircraft handling and aircraft maintenance. Division designation and responsible officers are shown in figure 2-9.

The principal duties and responsibilities of each division are discussed in the following paragraphs:

V-1 Division

The **flight deck division** is responsible for the handling of all aircraft on the flight deck. This includes

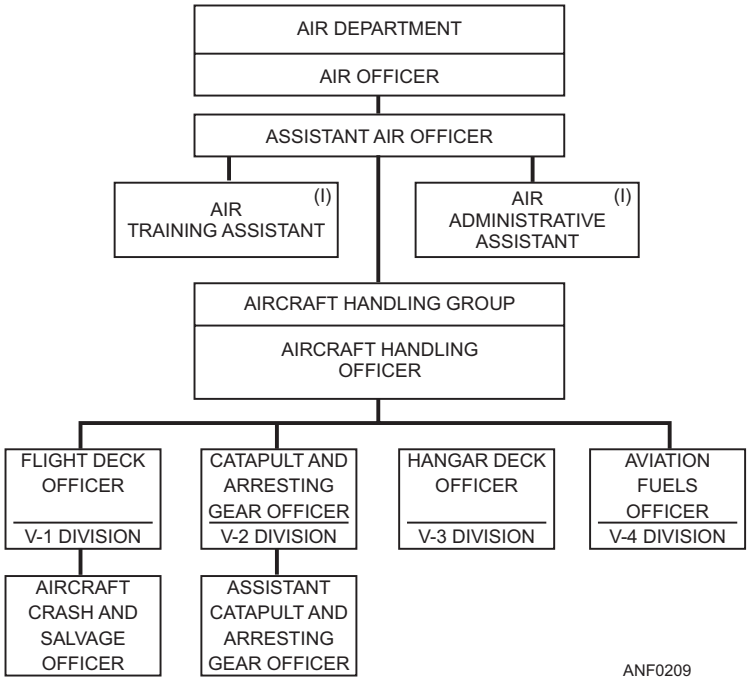


Figure 2-9.—Administrative organization of an air department.

spotting and directing aircraft and operating aircraft-handling equipment, such as tractors and cranes. Also included in this division is the aircraft crash, fire, and rescue party. This crew is under the direction of the aircraft crash and salvage officer. They are responsible for flight deck fire fighting, rescue, clearing flight deck crashes, and maintaining crash and fire-fighting equipment.

V-2 Division

Personnel in the **catapult and arresting gear division** are usually assigned to one of two crews. The catapult crew is charged with the operation and maintenance of all catapult machinery. The arresting gear crew is responsible for the operation and maintenance of the arresting gear and barricade equipment. Occasionally, the catapult and arresting gear crews assist in clearing flight deck crashes.

V-3 Division

The **hangar deck division** is charged with the handling of all aircraft on the hangar deck. Other responsibilities include operation of aircraft elevators, hangar bay doors, and roller curtains. They also maintain assigned fire-fighting equipment, such as sprinkler systems, water curtains, and foam monitors. Certain personnel from the V-3 division are assigned to the conflagration (fire) control stations on the hangar deck. Repair 1A (hangar deck forward) is operated by personnel from the V-3 division.

V-4 Division

The **aviation fuels division** is charged with the operation and upkeep of the carrier aviation fuel and lube oil transfer system. This also includes the inert gas producer and distribution systems (when installed). They service embarked aircraft with clean, uncontaminated fuel, and replenish the ship's supply of aviation fuel and lube oil.

WEAPONS DEPARTMENT

In general, the weapons department is responsible for the requisition, receipt, inspection, unpackage, inventory, account for, store, assemble and process for shipment of the following weapons: air/surface and sub-surface missiles, bombs, rockets, and components, including aircraft guns and accessories, ammunition handling equipment, and aircraft arming, suspension, launch and release equipment. The weapons department is also responsible for loading and fusing aviation ammunition, and maintaining shipboard weapons elevators, magazines, sprinkler systems, and ammunition storage facilities.

ENGINEERING DEPARTMENT

The engineering department is responsible for all machinery, propulsion, ventilation, water supply, piping systems, electrical systems, and electronic devices on board the ship.

NAVIGATION DEPARTMENT

The navigation department is responsible to the commanding officer for the safe navigation and piloting of the aircraft carrier. This department also trains deck watch officers, orders navigational equipment for the ship, and provides for its upkeep.

SUPPLY DEPARTMENT

The supply department handles such matters as ordering, receiving, storing, issuing, and accounting for all supplies needed for the ship's operation.

MEDICAL DEPARTMENT

The medical department is responsible for maintaining the health of all personnel and advising the commanding officer in matters of sanitation and hygiene.

DENTAL DEPARTMENT

The senior dental officer is responsible for the dental care and oral hygiene of the personnel aboard.

AIRCRAFT INTERMEDIATE MAINTENANCE DEPARTMENT (AFLOAT)

To improve fleet readiness, the Chief of Naval Operations established an aircraft intermediate maintenance department (AIMD) on aircraft carriers. The AIMD assumes the entire responsibility for the intermediate maintenance effort on the carrier. Therefore, relieving the air wing commander of the responsibility of providing O- and I-level maintenance for aircraft assigned.

AIMDs are organized in a manner similar to shore-based aviation maintenance departments. See

figure 2-10. Some personnel are permanently assigned to the AIMD, and some are temporarily assigned from the squadrons embarked on the carrier. The temporarily assigned personnel accompany their squadrons when the squadrons disembark to be based ashore.

Q2-20. In addition to being a line officer qualified for command at sea, the commanding officer of an aircraft carrier must have what other qualification?

Q2-21. In peacetime, what is the maximum number of divisions normally assigned to the air department?

Q2-22. What division is responsible for handling all aircraft on the flight deck?

Q2-23. What division is responsible for upkeep of the carrier aviation fuel and lube oil transfer system?

Q2-24. What department trains deck watch officers, orders navigational equipment for the ship, and provides for its upkeep?

Q2-25. What department on an aircraft carrier is entirely responsible for all intermediate-level aircraft maintenance?

CARRIER DIVISIONS

LEARNING OBJECTIVE: Recognize the broad purpose of the aircraft carrier within a Navy task force.

Now you know the basic organization of a carrier. This knowledge allows you to understand how your carrier fits in the total organization of the Navy. If more than one carrier is operating with a Navy task force, your carrier is a part of a carrier division (CARDIV). The commander of a carrier division is usually an admiral, who is assisted by a staff of highly qualified officers and administrative personnel.

The carrier division will be a part of either the Naval Air Force, U.S. Atlantic Fleet or the U.S. Pacific Fleet. A carrier division operating with the Atlantic Fleet will receive orders from the Commander, Naval Air Force, U.S. Atlantic Fleet (COMNAVAIRLANT). If the carrier operates with the Pacific forces, orders will come from the Commander, Naval Air Force, U.S. Pacific Fleet (COMNAVAIRPAC). COMNAVAIRLANT is directed by the Commander in Chief, U.S. Atlantic Fleet (CINCLANTFLT). COMNAVAIRPAC is directed by the Commander in Chief, U.S. Pacific Fleet (CINCPACFLT). CINCLANTFLT and

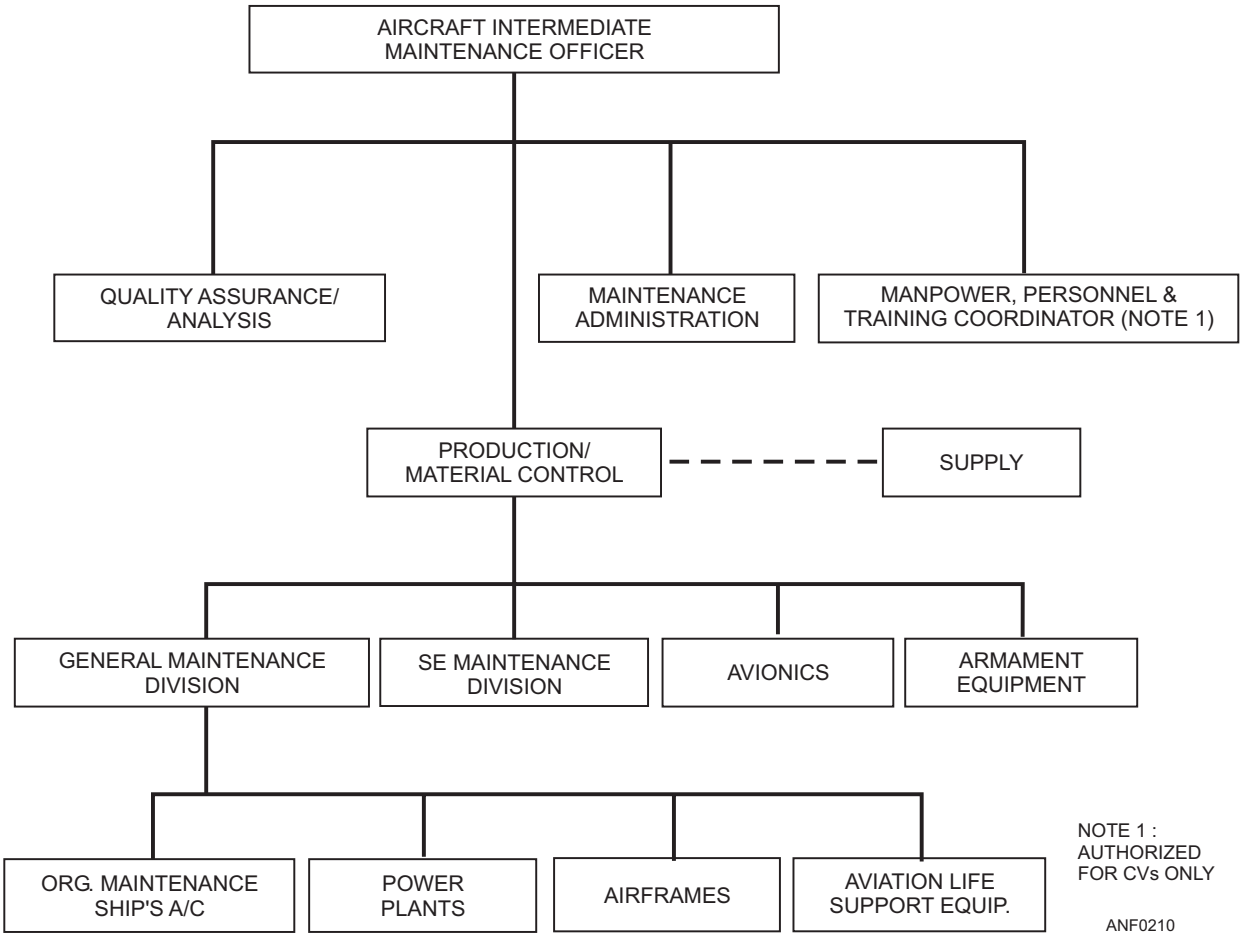


Figure 2-10.—Aircraft intermediate-level maintenance department (afloat) organizational chart.

CINCPACFLT are directly under the Chief of Naval Operations (CNO). The CNO is the Navy representative for the Joint Chiefs of Staff. They have the responsibility for the protection of the United States.

Q2-26. The commander of a carrier division is usually an officer of what rank?

Q2-27. Who is the Navy representative for the Joint Chiefs of Staff?

TYPICAL CARRIER SCHEDULE

LEARNING OBJECTIVE: Identify the purpose of the carrier schedule.

A carrier needs periodic repair and refitting. The time scheduled for this work is called a yard period. In a Navy shipyard, the carrier is repaired and any change or modernization is done. Included are rearrangement of compartments, repair of machinery, and installation of new systems. At this time, required supplies and spare parts are loaded aboard for both the carrier and its supported squadrons.

The carrier then takes several shakedown and training cruises. During the shakedown cruises, the carrier is checked for satisfactory operation of machinery, equipment, and systems. A return to the shipyard may be needed to correct discrepancies. During the training cruises, the squadron's and ship's personnel are trained in operations and procedures necessary to complete the ship's mission.

The carrier proceeds to its patrol area and conducts operations according to its mission. Supplies are provided by supply ships by underway replenishment (UNREP), carrier onboard delivery (COD) aircraft, or by vertical replenishment (VERTREP) helicopter squadron's. The carrier usually takes a breather one or more times during this deployment period. This break allows personnel to go on liberty in foreign countries, and bring supplies on board that are difficult to get at sea.

After the deployment period, the carrier returns to its homeport for refitting. Each return to home port does not involve a yard period. While the carrier is home ported, the squadrons that were aboard are based ashore. While the carrier is being refitted and re-supplied during home port periods, personnel are transferred and new personnel are trained. The carrier is now ready for deployment.

Q2-28. Define a "yard" period as it relates to an aircraft carrier.

Q2-29. How are aircraft carriers supplied with provisions during deployment?

DESIGNATION AND TYPES OF NAVAL AIRCRAFT

LEARNING OBJECTIVE: Identify naval aircraft designations and the major fleet aircraft.

The present system of designating naval aircraft was initiated in late 1962. This system applies to all U.S. military aircraft. All the aircraft designations have one thing in common—a hyphen. The letter just before the hyphen specifies the basic mission, or type, of aircraft. The basic mission letters are as follows:

A—Attack
B—Bomber
C—Transport
E—Special electronic installation
F—Fighter
H—Helicopter
K—Tanker
O—Observation
P—Patrol
R—Reconnaissance
S—Antisubmarine
T—Trainer
U—Utility
V—VTOL and STOL
X—Research

If the aircraft has been modified from its original mission, a letter in front of the basic mission letter indicates its modified mission. Mission modification letters are as follows:

A—Attack
C—Transport
D—Director (for controlling drone aircraft or missiles)
E—Special electronic installation
H—Search/rescue
K—Tanker
L—Cold-weather aircraft (for Arctic or Antarctic operations)
M—Mine countermeasures
O—Observation
P—Patrol
Q—Drone
R—Reconnaissance
S—Antisubmarine
T—Trainer
U—Utility
V—Staff
W—Weather

All the aircraft designations have one thing in common—a hyphen; for example, the F/A-18E *Hornet*

has a multipurpose role. The first letter(s) identify its mission. A number after the hyphen specifies the design number of the aircraft. A letter other than A (A being the original design) after the design number shows a change in the original design. For example, in F/A-18E, the F means fighter and A means attack aircraft. Its design number is 18, and it has been modified four times, represented by the E (fifth letter of the alphabet). Another example is the A-6A. When it is modified to perform early-warning missions, it then becomes the EA-6B *Prowler* because of the special electronic installation required for such missions.

If both the special-use letter and the modified mission letter apply to the same aircraft, the special-use letter comes first. For example, YEP-3E refers to a prototype (Y), early warning (E), patrol aircraft (P), design number 3, and the design has been modified four times.

Table 2-1 gives the basic mission, design number, manufacturer, and popular name of most naval aircraft.

Table 2-1.—Naval Aircraft Identification, Manufacturers and Names

BASIC MISSION AND DESIGN NUMBER	CONTRACTOR/ MANUFACTURER	POPULAR NAME
AV-8	McDonnell-Douglas	Harrier
C-2	Grumman	Greyhound
C-9	McDonnell-Douglas	Skytrain II
C-12	Beechcraft	Kingair
C-20	Gulfstream-Aerospace	Gulfstream
C-130	Lockheed	Hercules
E-2	Grumman	Hawkeye
E-6	Boeing	Mercury
EA-6	Grumman	Prowler
F-14	Grumman	Tomcat
F/A-18	McDonnell-Douglas	Hornet
P-3	Lockheed	Orion
S-3	Lockheed	Viking
T-2	North American	Buckeye
T-34	Beech	Mentor
T-45	McDonnell-Douglas	Goshawk
OV-10	North American	Bronco
HH-1	Bell	Iroquois/Huey
AH-1	Bell	Corbra
SH-2	Kaman	Seasprite
SH-3	Sikorsky	Sea King
CH-46	Boeing-Vertol	Sea Knight
H-57	Bell	Jet Ranger
SH-60	Sikorsky	Sea Hawk
RH-53	Sikorsky	Sea Stallion
V-22	Bell-Boeing	Osprey

The Navy has aircraft of each major type. This includes fighter, attack, patrol, and ASW that are far superior to those flown in the past. As you read the rest of this section, refer to figures 2-11 and 2-12, which show some of the aircraft currently in the Navy inventory. The Navy is constantly seeking better and more advanced aircraft operational capabilities. Manufacturers are aware of this and are constantly developing products to meet these demands. Some combat aircraft are described in the following paragraphs.

MCDONNELL-DOUGLAS HORNET, F/A-18

The F/A-18 is a twin-jet-engine aircraft designed for all-weather fighter escort and light attack. The *Hornet* is capable of catapult launch and arrested landings for carrier operations.

The crew consists of a pilot on the F/A-18 model aircraft, and a pilot and student on the TF/A-18 model aircraft. The *Hornet* is powered by two General Electric F404-GE-400 engines. Each jet engine is rated in the 16,000 pounds of thrust class. The F/A-18 has in-flight refueling capability, and it can carry three external fuel tanks for additional range.

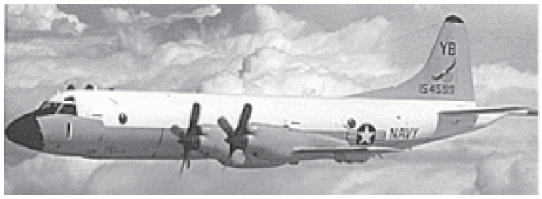
The *Hornet* has nine weapon stations. Two are wing-tip stations for Sidewinders, and two outboard wing stations for fuel tanks or air-to-ground weapons. There are two nacelle fuselage stations for Sparrows or sensor pods, and two inboard wing stations for fuel

F/A-18 HORNET

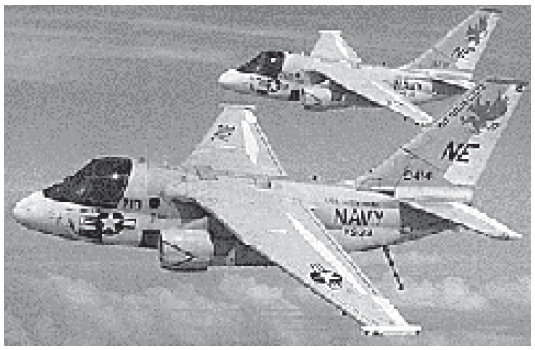
F-14 TOMCAT

EA-6B PROWLER

AV-8A HARRIER



P-3 ORION



S-3 VIKING

E-2C HAWKEYE

T-45 GOSHAWK

C-9 SKYTRAIN II

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Figure 2-11.—Representative types of fixed-wing aircraft.

V-22 OSPREY

UH-46 SEA KNIGHT

AH-1W SUPER COBRA

H-57 JET RANGER

UH-1N HUEY

H-3 SEA KING

SH-2 SEASPRITE

SH-60B SEAHAWK

H-53 SUPER STALLION

ANF0212

Figure 2-12.—Representative types of rotary-wing naval helicopters.

tanks or air-to-ground weapons. Also, there is one centerline station for fuel or air-to-ground weapons. The internal M61A1 (20-mm) gun is mounted in the nose.

GRUMMAN TOMCAT, F-14

The F-14 is a twin-engine fighter designed for aircraft carrier operations. It provides the carrier task force with its first-line offense and defense against enemy air threat. The crew consists of a pilot and a radar intercept officer.

The F-14 carries six long range AIM-54A Phoenix missiles that can be guided against six separate threat aircraft at long range, which is controlled by the F-14s AWG-9 weapons system. Sparrow missiles are carried for medium-range combat. Sidewinders and one M61A1 gun (20-mm) are available for close-range aerial combat. The *Tomcat's* variable swept wings give

it a combat maneuverability that could not have been achieved with a "standard" fixed platform wing. The aircraft is powered by two Pratt and Whitney TF30-P-412 engines with afterburners.

GRUMMAN PROWLER, EA-6

The EA-6 *Prowler* was designed to compliment the Navy's defenses in today's electronic warfare environment for carrier and advanced base operations. With a crew of four, a pilot and three electronic countermeasures officers (ECMOs), this long-range, all-weather-capable aircraft has the ability to intercept, analyze, and effectively jam and neutralize hostile radar.

The EA-6 is powered by two Pratt and Whitney J52-P-408 turbojet engines, and it has a combat range of 2,083 nautical miles and a maximum speed at sea level of 651 mph. It can carry electronic countermeasure (ECM) pods, external fuel cells, and stores to support strike aircraft, ships, and ground troops.

MCDONNELL DOUGLAS HARRIER II, AV-8

The *Harrier* is one of today's truly unique and most widely known military aircraft. The only fixed-wing, vertical short takeoff and landing (V/STOL) aircraft in the free world. The original design was based on a French engine concept, adopted and improved upon by the British. The U.S. Navy and Marine Corps showed a major interest in the *Harrier* for day or night attack and close troop ground support missions.

With a crew of one pilot, it is powered by one Rolls-Royce Pegasus F-402-RR-404 vectored thrust turbofan engine. Its movable engine exhaust nozzles gives it the capability of vertical flight. Ordnance wing mounts carry 500 or 1,000 pound bombs, and under belly pod-mounted, high-speed machine guns. Forward Looking Infrared Radar (FLIR) and Night Vision Goggles (NVGs) are some of the *Harrier's* war-fighting capabilities.

LOCKHEED ORION, P-3

The P-3 *Orion* is a land-based ASW aircraft. It represents advancements stemming from the Navy's antisubmarine research and development program over the last several years.

It is the world's most complete airborne antisubmarine detection system. The C model has a new data processing system. It uses a high-speed digital computer for obtaining information from both the aircraft's submarine detection sensors and a memory bank. The system display provides a readout of tactical ASW detection information to the operator.

It is powered by four Allison turboprop engines. The cabin is air-conditioned, pressurized, and equipped with bunks and a galley. Normally, a crew of 10 is needed for ASW operations. Included in its armament are depth charges, torpedoes, and rockets.

LOCKHEED VIKING, S-3

The S-3 is the newest ASW aircraft in the Navy. It is equipped with infrared sensors for night operation. Its digitally computerized sensors include a high resolution radar. It also has a magnetic anomaly detection (MAD) gear in its tail section. MAD equipment detects metal objects by monitoring disturbances of the earth's magnetic field.

The pressurized S-3 can search for subs from 35,000 feet at speeds over 300 knots. Its two turbofan engines are also efficient at low altitudes and low speeds.

GRUMMAN HAWKEYE, E-2

The *Hawkeye* was designed with one primary mission in mind: patrolling the skies to detect impending attack by hostile aircraft, missiles or sea forces. Capable of all-weather carrier operations, the *Hawkeye* provides strike and traffic control, area surveillance, search and rescue guidance, navigational assistance and communications relay. With its 24-foot revolving radar dish and sophisticated electronic equipment it can track, detect or direct targets within a three-million-cubic-mile area.

The *Hawkeye* has a five-man crew, two pilots and three equipment operators. It is powered by two Allison T56-A-422 turboprop engines and has a speed of 630 mph.

SIKORSKY SEA KING, SH-3

The SH-3 is a twin-engine helicopter. It's used primarily for antisubmarine warfare, but it is used also for sea/air rescue and transportation.

The crew consists of a pilot, copilot, sonar operator, and a relief sonar operator. Designed for land and carrier ASW operations, the A-model incorporates an automatic folding pylon. In addition to the sonar detection equipment, it is equipped with an automatic

hovering device. It is capable of water landing and takeoff.

Distinguishing features include a hull-shaped fuselage and outrigger sponson's, into which the main landing gear retracts.

A fixed horizontal stabilizer is installed on the upper right side of the pylon, and two General Electric gas turboshaft engines are mounted side by side above the fuselage and forward of the rotor head.

SIKORSKY SEA HAWK, H-60

The *Sea Hawk*, better known as the LAMPS (Light Airborne Multipurpose System) helicopter provides all-weather capability for detection, classification, localization, and interdiction of ships and submarines. Secondary missions include; search and rescue, medical evacuation, vertical replenishment, special warfare support and communications relay.

It has a crew of four, two pilots and two enlisted aircrew, and is powered by two General Electric T700-GE-401 engines. Different variants of the *Sea Hawk* enable it to perform ASW, logistic, weapons delivery or troop transport missions.

SIKORSKY SUPER STALLION, H -53

The *Super Stallion's* primary mission is to move cargo and equipment with a secondary role of troop transfer during amphibious assault operations. With two versions, utility and mine countermeasures, this heavy lift helicopter is one of the free worlds largest and most powerful. It has a crew of three, powered by three General Electric T64-GE-416 engines, seven main rotor blades, and weighs 73,500 maximum loaded. The *Super Stallion* can refuel in flight, has accommodations for 38 combat-equipped troops or 24 litter patients, and can lift over 16 tons.

BOEING-VERTOL SEA KNIGHT, H-46

The H-46 has a tandem rotor configuration, which sets it apart from the single rotor design. The *Sea Knight* is a medium lift cargo and troop transport helicopter that has been the workhorse for the Navy and Marine Corps for decades. Numerous modifications and upgrades, increased fuel capacity, fiber glass rotor blades, rescue hoist, 10,000-pound external cargo loading provisions, automatic blade fold, guns and armor are just a few of the improvements.

Powered by two General Electric T58-GE-16 turboshaft engines, the *Sea Knight* can reach speeds of 166 mph, weighs 23,300 pounds fully loaded, and has a crew of three—two pilots and one crewman.

Q2-30. In what year was the present naval Aircraft Identification System initiated?

Q2-31. In the aircraft designation F/A-18E, what does the letter "F" specify?

Q2-32. In the aircraft designation F/A-18E, what does the letter "E" represent?

Q2-33. What contractor manufacturers the SV-22 Osprey?

SUMMARY

In this chapter, you have learned about naval aviation organization and the types of aircraft found in squadrons and on naval air stations. You have also learned about squadron organization and the types of duties you might be assigned within a squadron.

ASSIGNMENT 2

Textbook Assignment: "Organization of Naval Aviation," chapter 2, pages 2-1 through 2-22.

2-1. What person is the head of the Navy Department?

1. The CNO
2. The DCNO
3. The Secretary of Defense
4. The Secretary of the Navy

2-2. The Navy Department falls under the authority of a cabinet post. This cabinet post is manned by what person?

1. Secretary of the Interior
2. Secretary of the Navy
3. Secretary of Defense
4. Secretary of the Treasury

2-3. What person is the immediate head of the military part of the Navy Department?

1. President
2. Secretary of the Navy
3. Chief of Naval Department
4. Chief of Naval Operations

2-4. When used properly, the chain of command serves which of the following purposes?

1. It provides direction in the assignment of duties
2. It provides a path of communication
3. It ensures efficiency in solving work- related problems
4. All of the above

2-5. Naval air stations provide which of the following services?

1. Supply
2. Repair
3. Specialized training
4. All of the above

2-6. The naval air station has the responsibility for providing what type of maintenance?

1. Organizational level
2. Intermediate level
3. Depot level (where available)
4. All of the above

2-7. Flight training provided by naval air stations consists of what three types?

1. Basic, preflight, and daily
2. Preflight, basic, and advanced
3. Daily, basic, and advanced
4. Preflight, daily, and advanced

2-8. A FRAMP provides which of the following types of training?

1. Specific type aircraft maintenance training only
2. Specific support equipment training only
3. Specific type aircraft maintenance training and specific support equipment training
4. Depot-level maintenance training

2-9. Typical naval air stations are divided primarily into what type of organizations?

1. Crews
2. Units
3. Divisions
4. Departments

2-10. Which of the following individuals is NOT a special assistant to the CO/XO of a naval air station?

1. The chaplain
2. The quality assurance officer
3. The general safety officer
4. The aviation safety officer

2-11. The distribution and collection of mail, duplicating and clerical services, and control of registered publications are the functions of what department?

1. Administration
2. Operations
3. Comptroller
4. Security

2-12. What department is responsible for the conduct of the military recreational program?

1. Personnel Department
2. Administration Department
3. Supply Department
4. Public Works Department

2-13. Advising the commanding officer in planning, organizing, directing, and executing a sound financial system that will contribute to the efficient, economical, and effective management of the station is a function of what department?

1. Supply
2. Finance
3. Comptroller
4. Administration

2-14. The administration of air traffic control is a function of what department?

1. Air operations
2. Security
3. Public works
4. Administration

2-15. What department is responsible for the logistic support of the naval air station and its tenant commands?

1. Supply
2. Finance
3. Comptroller
4. Administration

2-16. What department is responsible for minor construction and building maintenance aboard a naval air station?

1. Supply
2. Administration
3. Air operations
4. Public works

2-17. Transportation aboard a naval air station is provided by what department?

1. Supply
2. Operations
3. Public works
4. Transportation

2-18. The issuance of aviation ordnance is a function of what department?

1. Weapons
2. Security
3. Air operations
4. Administration

2-19. Under the direction of the medical officer, which of the following persons oversees all matters pertaining to aviation medicine?

1. Emergency room physician
2. Flight surgeon
3. Dental officer
4. Hospital Corpsman

2-20. Naval aircraft maintenance is divided into how many levels?

1. One
2. Two
3. Three
4. Four

2-21. Inspecting and adjustment of aircraft parts are performed at what maintenance level?

1. Organizational
2. Intermediate
3. Depot
4. Moderate

2-22. Major overhaul and repair of aircraft is performed at what activity?

1. Aircraft squadron
2. Aircraft Intermediate Maintenance Department (AIMD)
3. Air station public works
4. Naval Aviation Depot (NADEP)

2-23. Calibration, testing, and repair of aircraft components are performed at what facility?

1. Organizational Maintenance Division (OMD)
2. Aircraft Intermediate Maintenance Department (AIMD)
3. Naval Aviation Depot (NADEP)
4. Moderate Level Repair Facility (MLRF)

2-24. What division of the aircraft maintenance department maintains the technical library?

1. Analysis
2. Administration
3. Quality assurance/analysis
4. Support equipment

2-25. What division provides clerical services for the AIMD?

1. Administration
2. Maintenance material control
3. Quality assurance/analysis
4. Supply

2-26. Scheduling workloads to ensure the efficient movement of all aircraft and parts through the AIMD is the responsibility of what branch?

1. Material control
2. Production control
3. Supply
4. Quality assurance

2-27. An operations maintenance division is normally established at a naval air station that has at least what number of aircraft assigned?

1. Seven
2. Six
3. Five
4. Four

2-28. The aircraft gas turbine engine program is divided into how many degrees of repair?

1. One
2. Two
3. Three
4. Four

2-29. What division is responsible for the aircraft tire/wheel maintenance and safety program?

1. Airframes division
2. Support equipment division
3. Tire/wheel division
4. Line division

2-30. What division is responsible for the calibration of precision measuring equipment (PME)?

1. Electrical repair division
2. Electronic systems division
3. Avionics division
4. Power plants division

2-31. Aircraft air-conditioning and pressurization system maintenance is performed by what division?

1. Aviation life support equipment division
2. Airframes division
3. Aviation support equipment division
4. Air-conditioning/pressurization division

2-32. Which of the following organizations is normally smaller than a naval air station?

1. The Naval Aviation Logistics Center
2. The Naval Test Center
3. The Naval Air Facility
4. The Naval Station

2-33. What maintenance activity manufactures parts and assemblies and provides engineering services?

1. The Naval Air Facility
2. The Organizational maintenance Facility
3. The Naval Aviation Depot
4. The Aircraft Intermediate Maintenance Facility

2-34. Which of the following squadrons are basic type squadrons?

1. Carrier only
2. Patrol only
3. Composite and noncombatant only
4. Carrier, patrol, composite, and noncombatant

2-35. What type of squadron is employed for various missions that include enemy attack, search, bombing, mining, and torpedo warfare?

1. Fighter
2. Attack
3. Bomber
4. Early warning

2-36. What type of carrier squadron uses both fixed-wing aircraft and helicopters for search and attack of enemy submarines?

1. Attack
2. Composite
3. Airborne early warning
4. Antisubmarine

2-37. Which of the following types of squadrons has the responsibility for the mining of waters?

1. Antisubmarine
2. Composite
3. Patrol
4. Tactical

2-38. Target towing is one of the functions of what type of squadron?

1. Composite
2. Patrol
3. Tactical support
4. Noncombatant

2-39. What type of squadron provides logistical support?

1. Tactical
2. Patrol
3. Composite
4. Attack

2-40. A member of a squadron should receive the greatest amount of help for professional advancement from which of the following officers?

1. Division officer
2. Chief petty officer
3. Education officer
4. Maintenance officer

2-41. Operational readiness of a squadron is the responsibility of what officer?

1. Commanding officer
2. Operations officer
3. Executive officer
4. Flight officer

2-42. Ensuring that the orders of a squadron's commanding officer are carried out is the direct responsibility of what person?

1. Crew chief
2. Department head
3. Executive officer
4. Division officer

2-43. In the maintenance department, which of the following officers has the responsibility for planning, scheduling, and supervising all activities for the production divisions?

1. Quality assurance/analysis officer
2. Maintenance material control officer
3. Assistant maintenance officer
4. Maintenance officer

2-44. What department is responsible for the operational readiness and tactical efficiency of the squadron?

1. Administration
2. Maintenance
3. Operations
4. Safety

2-45. In a squadron, what division inspects the work to ensure that repair work on aircraft, engines, accessories, and equipment has been done correctly?

1. Aircraft
2. Line
3. Safety
4. Quality assurance/analysis

2-46. Supervising, coordinating, and completing scheduled maintenance is the responsibility of what division?

1. Maintenance control
2. Avionics
3. Safety
4. Aircraft

2-47. Performing preflight, turnaround, daily, and postflight inspections is the responsibility of what division?

1. Line
2. Avionics
3. Safety
4. Aircraft

2-48. Maintaining custody of a squadron's support equipment is the responsibility of what division?

1. Line
2. Avionics
3. Safety
4. Aircraft

2-49. Management of the Foreign Object Damage (FOD) program is the responsibility of what division?

1. Line
2. Avionics
3. Aircraft
4. Quality assurance/analysis

2-50. Welfare and morale of personnel aboard a carrier are the direct responsibility of what person?

1. Welfare officer
2. Senior chaplain
3. Executive officer
4. Commanding officer

2-51. In a carrier air wing, what officer has the responsibility for maintaining the squadron organization?

1. The air wing commander
2. The chief of naval operations
3. The ship's commanding officer
4. The squadron commanding officer

2-52. What department is responsible for the combat information center?

1. Air
2. Operations
3. Maintenance
4. Administration

2-53. What is the maximum number of divisions normally established within the air department?

1. Four in both wartime and peacetime
2. Seven in both wartime and peacetime
3. Four in wartime and seven in peacetime
4. Four in peacetime and seven in wartime

2-54. The aircraft crash, fire, and rescue party is included in which of the following divisions?

1. V-1
2. V-2
3. V-3
4. V-4

2-55. What division is charged with the operation and maintenance of catapults and arresting gear on an aircraft carrier?

1. V-1
2. V-2
3. V-3
4. V-4

2-56. The V-3 division is responsible for what function on an aircraft carrier?

1. Aircraft maintenance
2. Catapult and arresting gear
3. Aviation fuels
4. Aircraft on the hangar deck

2-57. What division is charged with the operation and upkeep of the aircraft carrier's aviation fuel and oil transfer system?

1. V-1
2. V-2
3. V-3
4. V-4

2-58. The care and maintenance of all machinery, piping systems, and electrical devices are the responsibility of what department on the ship?

1. Supply
2. Weapons
3. Engineering
4. Air operations

2-59. The aircraft intermediate maintenance department (afloat) is organized in a similar manner to which of the following shore-based activities?

1. The supply department
2. The aircraft maintenance division
3. The operations maintenance department
4. The aviation maintenance department

2-60. An aircraft intermediate maintenance department (afloat) is manned with what type of personnel?

1. Permanently assigned maintenance personnel only
2. Temporarily assigned personnel from embarked squadrons only
3. Permanently assigned maintenance personnel and temporarily assigned personnel from embarked squadrons
4. Civilians

2-61. The designation of the basic mission of an aircraft is indicated by what means?

1. A letter only
2. A letter followed by a number
3. A number only
4. A number followed by a letter

2-62. What is the letter identifier for the aircraft mission of transport?

1. U
2. T
3. C
4. S

2-63. In an aircraft designation, what is the basic aircraft mission for the letter "K"?

1. Research
2. Tanker
3. Transport
4. Observation

2-64. What is the letter identifier for the aircraft mission of antisubmarine?

1. R
2. H
3. A
4. S

2-65. What type of aircraft does the aircraft mission modification letter "Q" identify?

1. Drone
2. Cold weather
3. Patrol
4. Utility

2-66. An aircraft designated for “staff” has what mission modification letter?

1. E
2. V
3. S
4. O

2-67. What is the mission modification letter in the F/A18-E *Hornet*?

1. F/A
2. E
3. A
4. F

2-68. To indicate a change in the original design of a aircraft, which of the following letters can NOT be used?

1. A
2. B
3. C
4. D

2-69. What does "E" in the aircraft designation EA-6A mean?

1. Attack
2. Design
3. Modified once
4. Modified with a special electronic installation

2-70. Refer to Table 2-1 of your text. The *Osprey* aircraft was made by what manufacturer?

1. McDonald-Douglas
2. Bell-Boeing
3. Lockheed
4. Grumman

2-71. What gives the *Tomcat* aircraft its excellent combat maneuvering capability?

1. Twin engines with afterburners
2. Variable swept wings
3. Six long-range missiles
4. Advanced hydraulic system

2-72. What feature makes the AV-8 *Harrier* unique among today's modern combat aircraft?

1. Vertical short takeoff and landing capabilities
2. High-speed digital computer data processing system
3. Electronic countermeasures equipment
4. High altitude capabilities

2-73. Which of the following ASW aircraft is equipped with infrared sensors for night operations?

1. A-3
2. H-3
3. P-3
4. S-3

2-74. What helicopter provides all-weather capability for detection, classification, localization, and interdiction of ships and submarines?

1. H-3
2. H-46
3. H-53
4. H-60

2-75. What helicopter has a tandem rotor system?

1. H-3
2. H-46
3. H-53
4. H-60